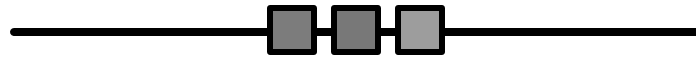




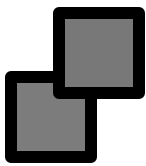
Enhancing California's In-State Natural Gas Production



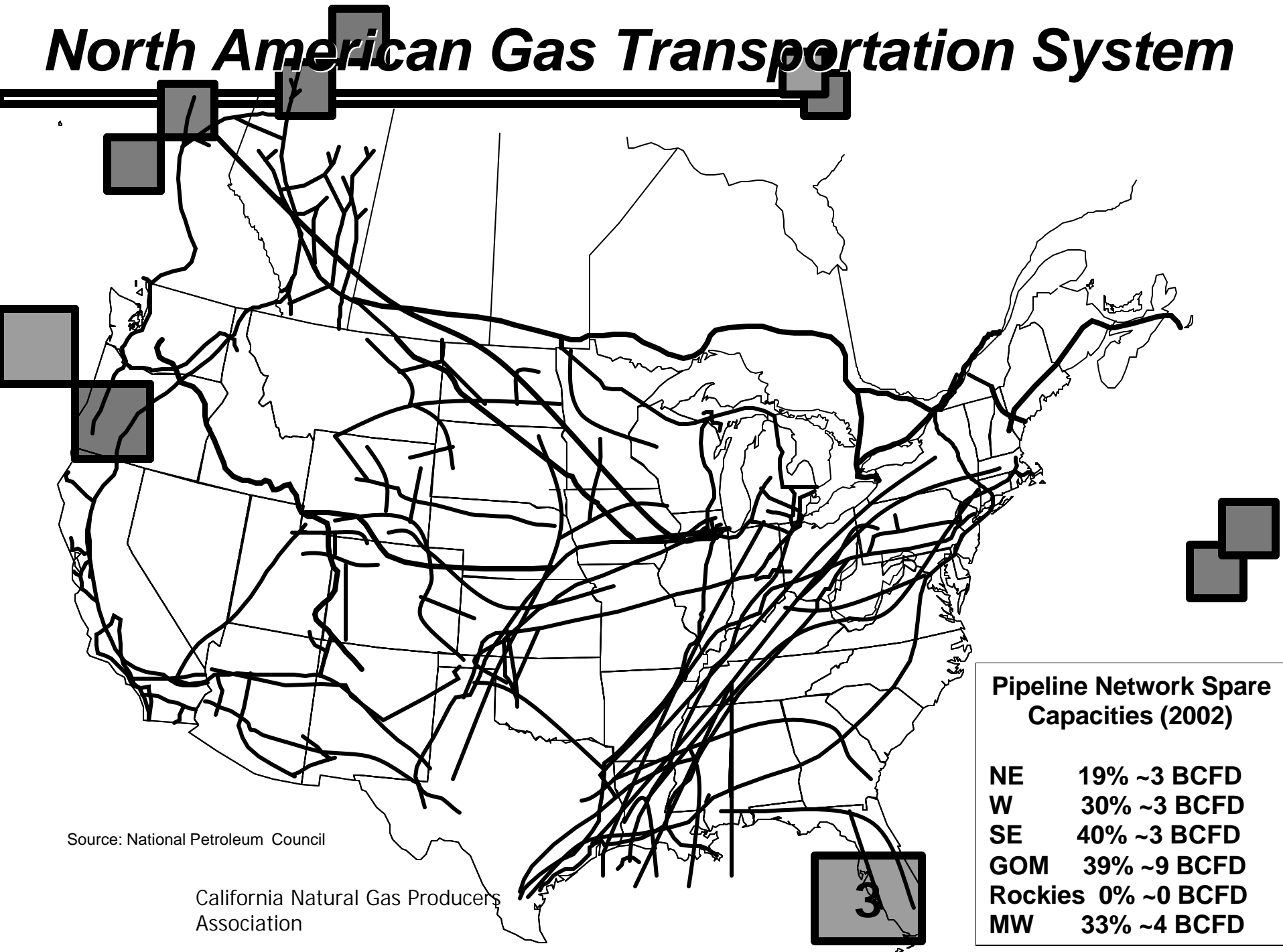
Rock Zierman
December 9, 2003



Why In-State Production is Important

- 
- 
- California is susceptible to interstate pipeline interruptions (Safety & Market)
 - Sizable in-state reserves exist
 - State government has made issue a priority
 - In-State Production has residual benefits
- 

North American Gas Transportation System



Source: National Petroleum Council

California Natural Gas Producers
Association

Pipeline Network Spare Capacities (2002)

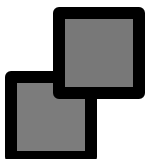
NE	19% ~3 BCFD
W	30% ~3 BCFD
SE	40% ~3 BCFD
GOM	39% ~9 BCFD
Rockies	0% ~0 BCFD
MW	33% ~4 BCFD



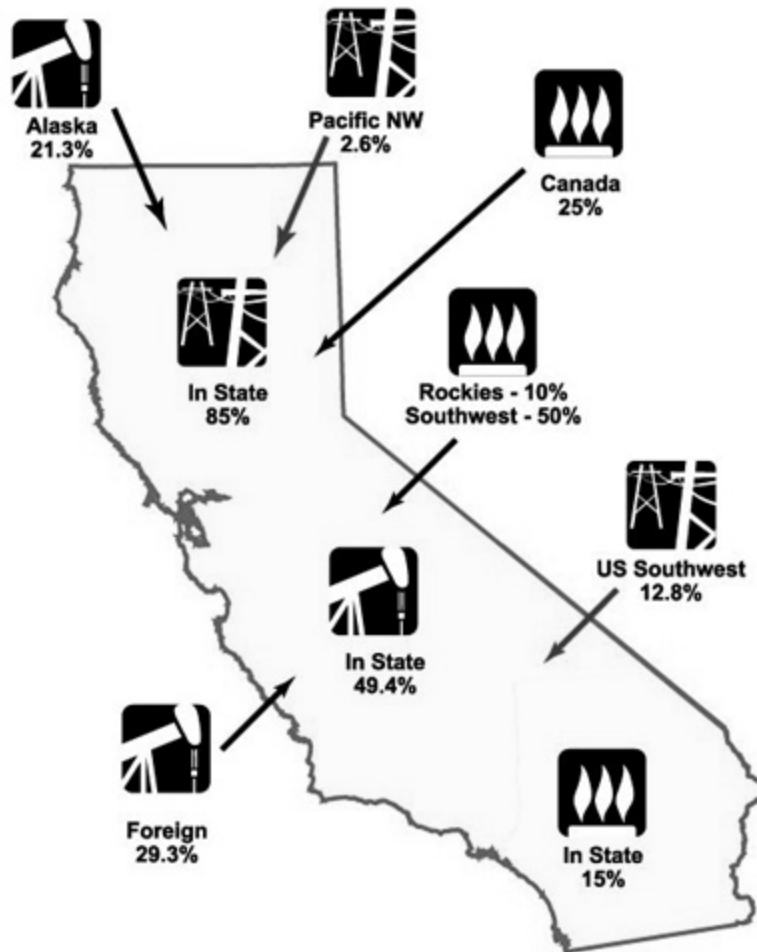
California's Supply and Reserve Picture



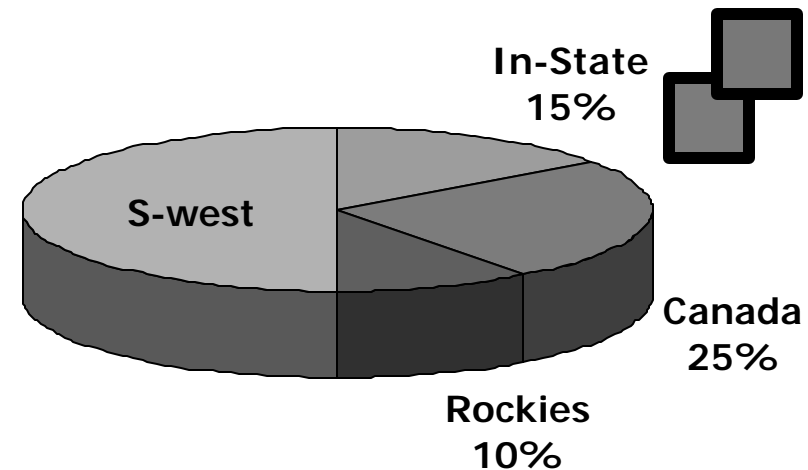
*Each day, Californians
consume about 6.5 billion
cubic feet of natural gas*

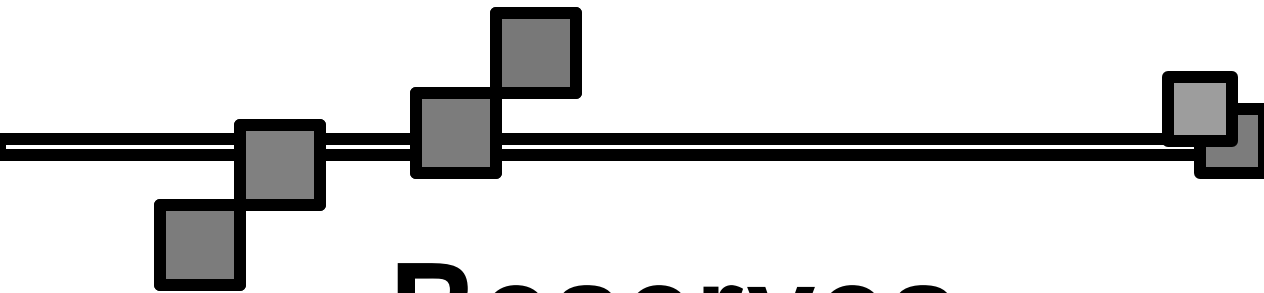


Sources of Energy in California

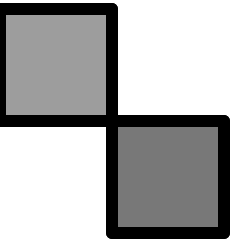


CALIFORNIA'S ENERGY SOURCES





Reserves



On Shore

4 trillion cubic feet

Off Shore

23 trillion cubic feet



Total

***75 years at
current production***

Why in-state production percentage is declining

- Wells are maturing (existing supplies decline about 29 percent per year)
- New drilling is difficult and not encouraged
- More dependent on natural gas for production of electricity



Off-shore Reserves



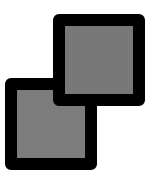
Barriers

- Access to utility infrastructure
- California's complex regulatory process
- Access to capital markets
- Subjective utility quality standards
- Limitations to installing new infrastructure
- Limitations to accessing private storage

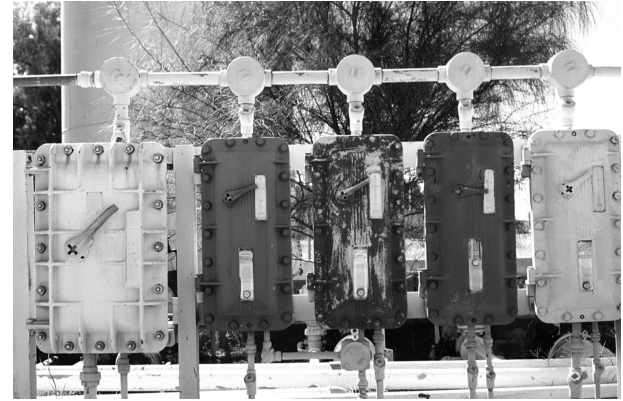




Obstacle 1: Access to Utility Infrastructure

- In northern California, millions of cubic feet of daily production shut-in due to pipeline issues
- 

Marginal Wells



California

Utilities require a well to
produce 50 mcf/d

Mmcf stranded

Jobs and revenues lost

Other States

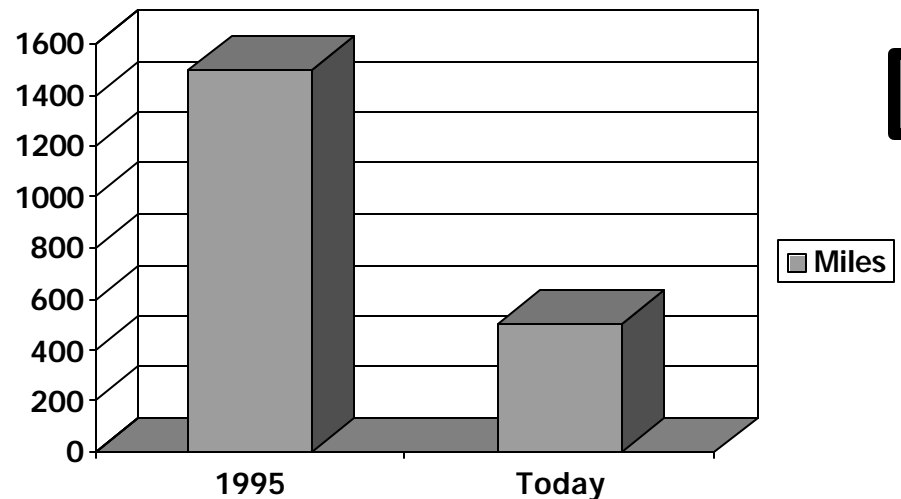
Accept gas from
marginal wells

Tax incentives

Source of income &
taxes

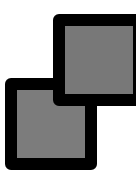
Gathering Lines

- PG&E retiring large sections of pipeline
- In 1995, Gas Accord included agreement to sell pipeline





Obstacle 2: Utility Quality Standards

- Southern California producers forced to more stringent standards, including CARB specs for fueling CNG vehicles
 - Northern California-Low Btu's, as much as 1/3 of reserves. Solution: Allow **private storage**
(i.e. Wild Goose or Lodi Gas Storage)
- 



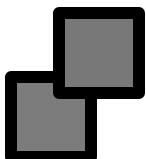
Obstacle 3: California's Regulatory & Permitting Process

- More than 25 different local, state, and federal agencies can be involved in the permitting of a single well
- Delays in permitting have caused abandoning of projects or stranding capital
- Oil and Gas Working Group in Kern County is a successful model





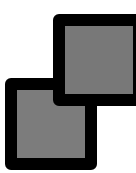
California Natural Gas Policy Act

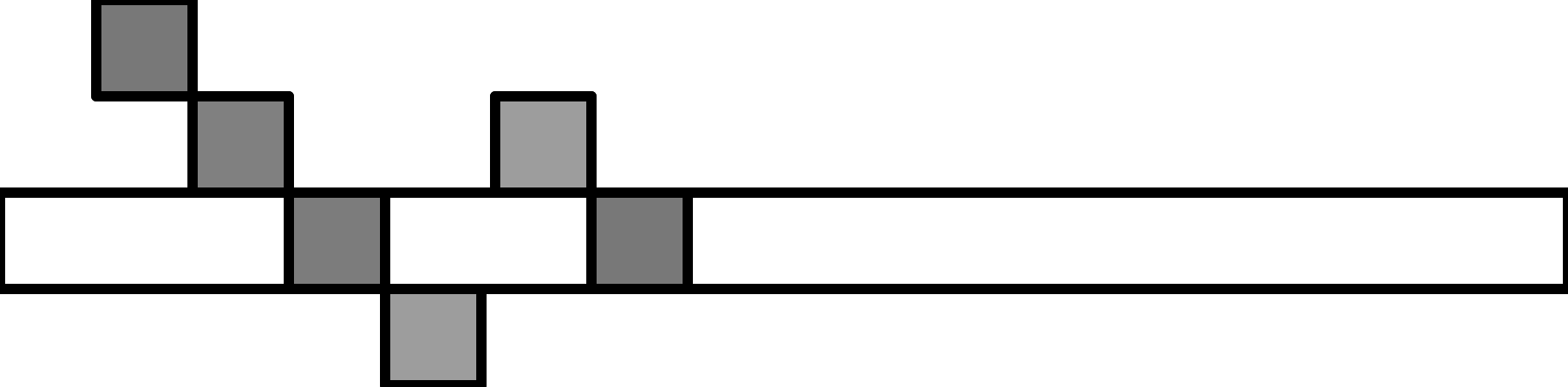


- Section 785.2 of the Public Utilities Code encourages, as a first priority, the increased production and storage of in-state natural gas
 - Gas Accord reaffirms Natural Gas Policy Act
- 



Residual Benefits of In-state Production

- 
- 
- Jobs
 - Tax revenues for state and local governments
 - Fees paid to state & local agencies
- 



Conclusion



Rock Zierman
December 9, 2003